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ABSTRACT

This report provides an evaluation of the Chapter I mathematics program for 1,020 first through eighth grade students in the Des Moines Independent Community School District. Included is a description of the program, information on program budget and expenditures, and narrative accounts of the attainment of 17 performance and process objectives. These objectives focus on administration, student performance, instructional processes, and family performance. Selected results show that: (1) students in grades 2-8 displayed gains in the mathematics score between pre- and post-testing with the Iowa Test of Basic Skills; (2) seventh and eighth grade students (N=204) displayed more positive attitudes toward learning after participating in the program; (3) students achieved mastery of over 82 percent of the objectives introduced to them in individual educational plans; and (4) Chapter I mathematics teachers did an outstanding job of contacting parents of students served. Among recommendations offered is the suggestion that the program administration stress the importance of maintaining and improving the attendance rate of students in the secondary mathematics program. (Budget and expenditure data, principal's report of Chapter I instruction, self-anchoring attitude scale, parent activities needs assessment form, and parent survey questionnaire are included in the appendices.) (JN)

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REPORT OF EVALUATION

Chapter I Mathematics Program

1983-84

Department of Evaluation, Research and Testing
Des Moines Independent Community School District
1800 Grand Avenue
Des Moines, IA 50307-3382

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Approved by: Morris D. Wilson

Morris D. Wilson, Ph.D.
Director of Evaluation, Research and Testing

October 10, 1984

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DES MOINES INDEPENDENT COMMUNITY SCHOOL DISTRICT
DEPARTMENT OF EVALUATION, RESEARCH AND TESTING
EVALUATION ABSTRACT

October 10, 1984

PROJECT TITLE:	Chapter I Mathematics Program
COORDINATORS:	Kathleen Bullington, Elementary Coordinator Anita Jones, Secondary Coordinator
STAFF:	1.33 - Coordinators (1.0 elementary, .33 secondary) 25.5 - Teachers (17.0 - elementary, 8.5 - secondary) 0.67 - Secretary 27.50 - Total Fulltime Equivalent Staff
OPERATIONAL SITES:	Elementary Schools: Brooks, Cattell, Edmunds-Jefferson, Findley, Howe, King-Perkins, Longfellow, Lucas, Madison, McKinley, Monroe-Rice, Moulton, Oak Park, Stowe, Wallace, Willard Transitional Schools: Callanan, Harding, Hiatt, Hoyt, Weeks Nonpublic Schools: All Saints, St. Anthony, Holy Family #1 (St. Peter); Holy Family #2 (St. John); Holy Family #3 (Visitation)
POPULATION SERVED:	Students in grades 1-8: 1,020 (computed by multiplying number of teaching staff by the designated student load for each teaching position. This is done due to the fact that the number of students served varies during the program year).
FUNDING:	Source: Chapter I, Education Consolidation and Improvement Act Amount Budgeted: $328,739.16 Amount Expended: $823,108.20 Cost per Pupil in 1983-84: $ 806.97 (based on 1,020 students)

COMMENTS:

1. Chapter I mathematics students displayed gains in the mathematics score between pre and posttesing with the Iowa Tests of Basic Skills. Scores on these tests are reported using a metric known as the Normal Curve Equivalent (NCE). This is a scale similar to the percentile rank scale, but allowing for a more accurate measurement of gain between pre and posttesting. NCE is the unit of measurement used nationally to measure achievement gains of Chapter I students. The total population of Chapter I students (grades 2-8) who completed both a pre and posttest achieved a gain of 7.2 NCE units in the mathematics composite score. The amount of gain specified in the program objectives was 5.0 NCE units. The gain exhibited during the 1982-83 school year was 5.6 NCE units.

2. Chapter I mathematics students achieved mastery of over 82 percent of the objectives introduced to them in individual educational plans.

3. Chapter I mathematics teachers did an outstanding job of contacting parents of students served. During first semester, parents of 89.8 percent of the elementary students and 73.6 percent of the transitional students were contacted. This has been assigned a high priority in the Chapter I programs of recent years.

RECOMMENDATIONS:

1. The program objective which specifies reporting achievement gains by Chapter I students on the ITBS using the percentile rank scale should be deleted. The Normal Curve Equivalent Scale (NCE scale) which is used nationally and in Des Moines for Chapter I achievement reporting is a superior metric when reporting of achievement gains is desired. Chapter I administration may, however, wish to continue requesting that test results be reported in percentiles as well as NCEs as the percentile scale is useful as an indicator of where Des Moines Chapter I students score in comparison to the national norms.

2. Chapter I program administration should investigate expansion of the Chapter I computer data base to allow reporting of data for educational plan objectives introduced and achieved. Taking such action would allow reporting as well as processing of this information to be accomplished more efficiently.

3. Chapter I program administration should continue to stress the importance of maintaining and improving the rate of attendance displayed by students in the secondary mathematics program so that this rate equals or exceeds that of nonprogram students at the same building.

A copy of the complete Evaluation Report is available upon request from the Department of Evaluation and Research, 1800 Grand Avenue, Des Moines, IA 50307-3382.

I. PROGRAM DESCRIPTION

Chapter I of the Education Consolidation and Improvement Act of 1981 provides financial assistance to local education agencies for programs to meet the special educational needs of educationally deprived children. Children are eligible for the program if they come from areas with high concentrations of low income families and their academic performance is below acceptable levels.

The Des Moines district, utilizing Title I funds, initiated a supplementary reading program during the 1965-66 school year and a supplementary mathematics program during the 1972-73 school year. The impetus for the programs was that there were significant numbers of students performing below desired levels on the Iowa Tests of Basic Skills.

In February, 1981, the National Dissemination Review Board awarded exemplary status to the Des Moines Title I Mathematics program (Grades 2-6). This status indicates the program was effective in providing compensatory mathematics services and could be used as a model for other school districts to develop similar programs.

During the 1983-84 school year, the district employed a fulltime equivalent staff of 25.5 teachers and 1.33 coordinators to provide Chapter I mathematics services for Grades 1-8. (The fulltime equivalency for the secondary math coordinator (.33) was computed by using the proportion of the total Chapter I secondary teaching staff comprised of secondary math teachers.) The program was located in 19 public elementary schools, 5 transitional schools and 5 nonpublic schools. Grades served in individual buildings varied according to available space and the organization of the school.

Student Selection

Students were identified according to their performance on the district's objectives based mathematics tests. Students were ranked in order of need according to their scores and a tentative list of students was selected until the scores reached a predetermined criteria or the space allocation for the teacher was filled. Classroom teachers then examined the lists and confirmed or questioned the choices. They judged if a student not on the list needed service or if a student on the list did not need service. For these students the Title Entry Skills Test (TEST) was administered to determine the students' achievement levels and refute/confirm the selection.

Chapter I regulations stipulate conditions under which students cannot be served. These conditions for not selecting students are listed in the Needs Assessment Checklist. Additionally, priorities were established by grade level. Students in the elementary program were selected according to the following order: 2-3-4-5-1. In the secondary program the grade order was 6-7-8.

Major Methods and Activities in the Instructional Program

The basic philosophy underlying the project was that Chapter I students are capable of learning. In applying this principle, the Chapter I staff was responsible for assessing each student's weaknesses and providing remedial instruction in those areas. Weaknesses (and strengths) were identified from the district's mathematics objectives based tests, which are based on the district's mathematics objectives for Grades K-8. Each student had an educational plan that was used to guide instruction and to provide a continuous record of concepts introduced and mastered

by the student. The elementary educational plan stays with the student throughout his or her involvement in the elementary Chapter I Mathematics programs. The secondary plan stays with the student throughout his/her involvement in the secondary Chapter I Mathematics programs.

The primary method of instruction used manipulative devices (blocks, beads, coins, etc.) to develop concepts. As the students recorded the results of their experiments with the manipulatives, they discovered arithmetic algorithms. Games and other activities were used to reinforce the learned concepts.

Organization for Instruction

Approximately 40 students were served daily by each fulltime teacher. The students received direct mathematics instruction from both the classroom teacher and the Chapter I teacher. Chapter I teachers instructed small groups of students; maximum group size did not exceed six per teacher in elementary schools and an average of eight per teacher in secondary schools. The location was in either the classroom or another designated area.

At the elementary level each group received a minimum of 100 minutes of Chapter I mathematics instruction per week. This time could have been taken from any class other than mathematics or reading. It also could have been taken from the mathematics class if the students were ability grouped for mathematics instruction in the classroom.

At the secondary level students received an average of 125 minutes per week of instruction from the Chapter I teacher. This time was taken frum any class other than mathematics or reading. Chapter I

teachers could team teach in the classroom with the district mathematics teacher whose classes consisted of ability grouped students scoring at or below the 40th percentile. They could serve more than 40 students but were required to maintain individual educational plans on only the 40 students assigned to them.

Parent Contact and Participation

Parents were involved in the program through participation in parent advisory council activities. During the 1983-84 school year, a district council provided a mechanism to disseminate copies of the Chapter I regulations, program proposals, program evaluations, and information about program learning strategies. The council, whose membership consisted of parents of Chapter I students, teachers (Chapter I and classroom) and community members, also provided a means for parents to make comments and suggestions about the Chapter I program.

Parents were also involved by the Chapter I staff through personal contacts. The program teachers visited homes, wrote letters, made telephone calls, planned and implemented activities for parents at each Chapter I school and encouraged parents to visit Chapter I classes so that they were aware of the Chapter I program and learned of their children's performance in the program.

II. BUDGET AND EXPENDITURES

Figure I lists the budgeted and expended funds for the Chapter I mathematics project for the 1983-84 school year. The figures are summarized from data provided by the Supervisor of Chapter I programs (see Appendix A).

Figure I

Chapter I Mathematics Project
Budget and Expenditures (as of July 17, 1984)

Category	Amount Budgeted	Amount Expended
General Administration	$ 33,080.20	$ 33,759.32
Indirect Charges	23,640.64	23,640.64
Professional Salaries	590,341.92	590,341.92
Substitutes	5,760.00	2,457.04
Classified Salaries	9,502.56	9,502.56
Fixed Charges	139,288.24	138,528.80
Materials and Supplies	5,612.00	4,881.96
Evaluation	14,942.88	14,942.88
Professional Services	3,400.00	2,662.08
Inservice		
Travel		
District Parent Advisory Council	850.32	871.80
Telephone	268.40	304.92
Mileage	2,052.00	1,214.28
Total	$ 828,739.16	$ 823,108.20

The budget figures submitted for the secondary Chapter I program included data for both the reading and math programs. In order to enable reporting of dollars budgeted and expended for the entire mathematics program, i.e. elementary and secondary, the secondary math dollars were computed for each line item as 44 percent of the total for secondary reading and math. While figures reported using this system may not be totally accurate, it was discovered that the secondary math program comprises about 44 percent of the total secondary program based on teaching staff assigned.

As can be seen from Figure I, expenditures for Chapter I Math totaled $823,108.20, approximately 99.3 percent of the amount budgeted. Cost per pupil for the 1,020 students was $806.97. This compares to a cost per pupil of $750.31 in 1982-83.

III. RESULTS OF EVALUATION

The evaluation of the Chapter I Mathematics program was based on 17 performance and process objectives selected from the project proposal submitted to the Iowa Department of Public Instruction in March of 1983. Accountability files were prepared to facilitate the collection of documentation for program objectives. The Chapter I program evaluator monitored the receipt of documentation on a monthly basis during the year. In this report of evaluation each objective monitored is quoted followed by narrative concerning attainment of the objective.

Administration Process Objective

1. Elementary Principals

   By November 30, 1982, the principal of each elementary school served by the project shall monitor the joint activities of the project teachers and classroom teachers. He/she will visit classrooms to assure that Chapter I students are receiving direct instruction in mathematics from the classroom teacher as well as from the Chapter I teacher.

   DOCUMENTATION: report of supervision of the Chapter I program submitted by December 3, 1982, to the Executive Director of Elementary Education (public) or to the Superintendent, Des Moines Diocese (nonpublic).

Appendix B contains a copy of the Principal's Report of Chapter I Supervision. Completed forms were submitted by principals of Chapter I buildings with the exception of two schools. One form was received without the signature of the principal. At one other building, the principal recorded observations of Chapter I classrooms rather than regular classrooms. All other forms were complete and submitted in a timely manner. According to the forms, principals were observing direct instruction being provided to Chapter I students by the classroom teacher and the occurrence of joint planning.

Additional comments concerning this objective may be found under Administrative Process Objective 1 in the Report of Evaluation for the Chapter I Reading Program. Aside from the exceptions noted this objective was achieved.

Student Performance Objectives

1. At the end of the instruction year, students (grades 2-8) enrolled in the mathematics program for a minimum of 80 days will demonstrate an increase in the mean percentile rank from pre to posttest on the mathematics composite score of the Iowa Tests of Basic Skills.

   DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

Table 1 reports pre and posttest results attained by students on the Iowa Tests of Basic Skills. Only students who completed both a pre and posttest were included in the data. The data is reported by percentile rank.

TABLE 1

ITBS/ITED Pre/Post Results (Percentiles)
Composite Mathematics Score*

Grade	N	Pretest Percentile	Posttest Percentile	Gain
2	112	16	26	+10
3	111	14	26	+12
4	97	27	41	+14
5	92	25	37	+12
6	83	26	31	+ 5
7	73	25	35	+10
8	40	22	32	+10

*The composite mathematics score is generated by three subtests known as mathematics concepts, mathematics problems and mathematics computation.

As indicated in Table 1, students at all grade levels demonstrated an increase in mean percentile rank from pre to posttesting, thereby achieving this objective. Without program impact the percentile rank would be expected to remain constant between pre and posttesting. Any increase in the percentile, therefore, is said to indicate growth. Hopefully, growth is due to the impact of instruction offered in the program.

A major drawback of the percentile rank scale is the fact that intervals between points on the scale are not equal. This factor makes it impossible to set any criterion level for amount of growth expected. To do so would be meaningless, as a given amount of increase from one point on the scale would not indicate the same growth as the same increase from another point.

A solution to this drawback is attained by use of the normal curve equivalent (NCE) scale. This scale is similar in some respects to the percentile rank scale, but has the advantage of equal intervals between points. For example, using the NCE scale, an increase from 20 to 24 indicates the same amount of increase as that between 60 and 64. This would not be true using the percentile rank.

The Des Moines Chapter I program adopted the NCE as the metric to measure growth between pre and posttesting in response to a change in national program guidelines several years ago. The next three student performance objectives in this report present test scores using the NCE. It is recommended that beginning in the 1984-85 school year, the Chapter I program delete the objective measuring growth by percentile in light of the information presented above. Chapter I

administration may, however, wish to continue requesting that test results be reported in percentiles as the percentile scale is useful as an indicator of where Des Moines Chapter I students score in comparison to the national norms.

2. At the end of the instruction year, students (grades 2-8) will demonstrate a proficiency on the mathematics composite score of the Iowa Tests of Basic Skills such that the average gain in NCEs will be at least 5.0.

   DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation, Research and Testing at the end of the project year.

3. At the end of the instruction year, students enrolled in the mathematics program for at least 80 days will demonstrate a proficiency on the mathematics composite score of the Iowa Tests of Basic Skills such that the average gain for grades 2-6 in NCE will be at least 6.0.

   DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation, Reseach and Testing at the end of the project year.

4. At the end of the instruction year, students enrolled in the mathematics program for at least 80 days will demonstrate a proficiency on the mathematic composite score of the Iowa Tests of Basic Skills such that the average gain for grades 7-8 in NCEs will be at least 3.0.

   DOCUMENTATION: Iowa Tests of Basic Skills scores submitted to the Director of Evaluation and Research at the end of the project year.

Table 2 reports ITBS scores for Chapter I mathematics students using the normal curve equivalent (NCE). The data in the table provides the data necessary for evaluation of student performance objectives 2, 3 and 4.

TABLE 2

ITBS Pre/Post Results (NCEs)
Composite Mathematics Score

Grade	N	Pretest NCE	Posttest NCE	Gain
2	112	28.9	36.3	+7.4
3	111	26.9	36.6	+9.7
4	97	37.0	45.3	+8.3
5	92	35.7	43.0	+7.3
6	83	36.3	39.8	+3.5
7	73	35.5	42.1	+6.6
8	40	33.8	39.9	+6.1
2-8	608	33.0 (Weighted Average)	40.2	+7.2

Table 2 reflects tests data for 608 Chapter I mathematics students who had both a pre and post score on the Iowa Tests of Basic Skills. Only the mathematics composite or "total math" score is used for purposes of evaluation. This score is generated from results obtained on three subtests (math concepts, math problems and math computation) and is probably the best indicator of general mathematics achievement yielded by this test.

Objective #2

This objective specifies a gain of 5 NCE units for students in all grades. To obtain this information, it is necessary to average the NCEs for each grade. To do this, a weighted average is computed in order to account for the difference in numbers at each grade level. As shown by Table 2, the gain in NCEs across all grade levels was 7.2 units, exceeding the specified criterion of 5.0 units. This objective was achieved.

Objective #3

This objective specifies an average gain of 6.0 NCE units for students in grades 2-6. According to Table 2, students in grades 2-6 achieved an average gain of 7.5 NCE units, exceeding the criterion. This objective was achieved.

Objective #4

Students in grades 7 and 8 were expected to show an average of 3.0 NCE units in mathematics between pre and posttesting. The 113 students in grades 7 and 8 for whom pre/post scores were available far exceeded this criterion. Seventh grade students displayed a gain of 6.6 units, while 8th grade pupils showed a gain of 6.1 NCEs. The average gain was 6.4 NCE units. This objective was achieved.

5. At the end of the instruction year, at least 55 percent of the first grade students enrolled in the mathematics program at least 80 days will achieve a score above the criteria score used for selection of students for Chapter I services.

   DOCUMENTATION: Mathematics Test for Performance Objectives scores submitted to the Director of Evaluation, Research and Testing at the end of the project year.

Scores on the Des Moines Mathematics Test for Performance Objectives, the primary instrument used for selection of Chapter I mathematics students, were available for 74 students. The criteria for selection used during the 1983-84 school year was 31 items correct out of a possible 40. Students scoring at or below 31 were selected, while those scoring 32 or above were generally not selected though other criteria were examined in some cases.

Chapter I students displayed an average raw score of 29.3 on the objectives based test. This yielded an average percent correct of 73.3. The average score attained by all first grade students in the district was 35 items or 87 percent correct. Twenty-five of the seventy-four students or 33.8 percent attained a score above that used for selection. This objective was not achieved as fewer than 55 percent of the students scored higher then the selection score.

6. Students (grades 1-8) enrolled into the program a minimum of 80 days will exhibit knowledge of mathematics by demonstrating mastery of 80 percent of the objectives presented to them.

   DOCUMENTATION: a completed Student Record Folder for each student served on file in each building and the Educational Plan Summary Report submitted to the project coordinators at the end of each semester.

Table 3 contains the information necessary for evaluation of student performance objective #6. Individual educational plans (IEPs) for Chapter I math students were built around the district mathematics objectives. A summary form submitted at the end of the year indicated the number of objectives introduced and mastered by each student.

TABLE 3

Mathematics Objectives Introduced and Achieved

Grade	N	Average Number of Objectives Per Pupil	Percent Attained
1	87	29	80.1
2	165	32	84.8
3	149	40	82.6
4	150	41	83.3
5	136	46	82.0
6	141	50	80.1
7	105	57	78.0
8	78	56	78.7
1-8	1011	43	81.3

Table 3 indicates that students in the mathematics program for 80 days or more mastered 81.3 percent of the objectives presented to them as part of their Individual Educational Plan (IEP). The average number of objectives in each educational plan was 43. By grade level, students reached 80 percent mastery in all grades except 7 and 8. At these grade levels, the rates of mastery were 78.0 and 78.7 percent respectively.

It is recommended that Chapter I administration investigate expansion of the Chapter I data base to allow reporting data for this objective on the computer. Taking such action would make reporting as well as processing of this information more efficient. This objective was achieved.

7. By the end of the project year, public school students (grades 7-8) enrolled in the program for a minimum of 80 days will display a more positive attitude toward learning than they displayed at the time of their entrance into the program.

   DOCUMENTATION: pre and post Attitude Toward Learning summary submitted to the Director of Evaluation, Research Testing at the end of the project year.

Appendix C contains a copy of the Student Self-Anchoring Attitude Scale (SAAS). This scale has been used in the Chapter I program for several years to measure attitude toward learning. The scale was developed by Heartland Area Education Agency. It has been validated as an effective measure for students above grade 5.

Table 4 reports results obtained by secondary Chapter I students from administration of this instrument. Students completed the instrument in the fall and spring. Results are reported for only students who completed the instrument at both administrations.

TABLE 4
Self Anchoring Attitude Scale Results
Chapter I Mathematics

School	N	Pre Raw Score	Post Raw Score	Gain
Callanan	24	6.75	6.62	-0.13
Harding	36	6.31	5.72	-0.59
Hiatt	52	5.13	6.44	+1.31
Hoyt	66	6.33	6.97	+0.64
Weeks	26	5.46	6.12	+0.66
All Schools	204	5.96	6.47	+0.51

According to the information in Table 4, the 204 students who completed the attitude toward learning instrument in the fall and spring displayed an increase of 0.51 in their average score. By school, students at Callanan and Harding showed a slight decline, while those at Hiatt, Hoyt and Weeks displayed an increase. This objective was achieved.

8. During the project year, public school students (grades 7-8) enrolled in the program for a minimum of 80 days will respond positively to the program as indicated by their rate of attendance being equal to or greater than that of all non-Chapter I students in the same schools.

   DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted with the May accountability data to the secondary coordinator and the Director of Evaluation, Research and Testing.

Table 5 indicates attendance of Chapter I students compared to that of non-Chapter I students in the same buildings. The attendance percent refers to the ratio of the number of days actually attended to the number of days possible.

During previous years, attendance data for the district was not in a form that allowed for an easy comparison of data between Chapter I and non-Chapter I students at the same building, i.e., it was difficult to determine building attendance without including Chapter I students. The data is now in a form that facilitates such a comparison.

TABLE 5

Secondary Chapter I Mathematics Attendance Data

School	Chapter I Students N	Chapter I Students Attendance Percent	Non-Chapter I Students N	Non-Chapter I Students Attendance Percent
Callanan	35	91.9	640	93.8
Harding	83	90.6	718	92.2
Hiatt	59	91.1	628	92.4
Hoyt	76	91.9	551	94.5
Weeks	38	91.0	790	93.4
Total	291	91.3	3,327	93.2

According to Table 5, the attendance rate of Chapter I students did not equal or exceed that for non-Chapter I students at any of the buildings or for the entire population. For the population, the attendance rate for Chapter I was 91.3%, while the rate for non-Chapter I students at those buildings was 93.2%, a difference of 1.9%. For the Chapter I secondary reading program, the difference in the attendance rate for the two groups was somewhat less -- only 0.4%.

Although the attendance rate of Chapter I math students at the secondary level is not far removed from that of non-program students, it is recommended that the Chapter I secondary coordinator continue to stress the importance of maintaining and improving the rate of attendance displayed by students in the mathematics program.

Instructional Process Objectives

1. The project teacher(s) in each building served by the program will identify eligible student participants by September 9, 1983.

   DOCUMENTATION: class lists of identified students and the eligibility checklist submitted to the project coordinator with the September accountability data.

Table 6 presents the data necessary for evaluation of this objective.

Chapter I mathematics teachers were in the process of selecting students for instruction by September 9, 1983. Some initial problems with determination of the score on the district mathematics objectives based test below which students were selected occurred very early in the school year. These problems which were beyond the control of Chapter I staff were resolved allowing for completion of the selection process soon after the date specified. A more refined process for math student selection in 1984-85 has been implemented and should make the process more efficient.

Lists of students selected are produced after Chapter I enrollment information is entered on the computer. Due to the number of students in the Chapter I program and the amount of data entry required, it was not possible to generate a list of first grade students from the computer until January of 1984. Following generation of the first grade list others were produced on a monthly basis with the final count made as of May 31, 1984. Each time a list was produced, copies were sent to each Chapter I teacher in order that corrections could be made where necessary. The lists were then returned to the Chapter I office where the corrections were entered prior to the time the next listing was produced.

Table 6 shows the number of students served by building and grade on January 16, 1984, the date of the first initial count generated by the computer. This table, as indicated, does not claim to provide the number of students served for a specified period of time. It only reports the numbers reported on a specific date.

TABLE 6

Number of Students Served
Chapter I Mathematics
(on Janaury 16, 1984)

School	Grade Level								Total
	1	2	3	4	5	6	7	8	
All Saints	--	6	--	--	--	4	--	--	10
Brooks	--	3	7	16	14				40
Cattell	--	7	5	5	5				22
Edmunds			10	13	14				37
Findley	--	8	6	2	5				21
Holy Family #1	--	--	6	10	8				24
Holy Family #2	5	5							10
Holy Family #3						9	2	--	11
Howe	10	16	7	6	1				40
Jefferson	12	8							20
King	19	15							34
Longfellow	4	9	11	5	6				35
Lucas	8	9	8	10	5				40
Madison	4	6	4	3	1				18
McKinley	--	5	5	5	5				20
Monroe			6	13	21				40
Moulton	--	13	10	10	9				42
Oak Park	--	8	6	--	5				19
Perkins			14	11	15				40
Rice	12	7							19
St. Anthony	3	3	5	5	--	6			22
Stowe	3	9	9	9	9				39
Wallace	--	5	13	10	9				37
Willard	--	7	13	10	10				40
Callanan						12	7	14	33
Harding						41	40	15	96
Hiatt						25	25	23	73
Hoyt						29	38	13	80
Weeks						22	8	9	39
All Schools	80	149	145	143	142	148	120	74	1,001

As shown by Table 6 a total of 1,001 students were served on January 16, 1984. Service was provided at 29 buildings including 5 nonpublic schools. January 16, 1984 was the date given for the first official count of students served in the mathematics program. The figures shown indicate students served on that date. They do not reflect the number of students served for a particular number of days.

2. By the end of the first semester, Chapter I mathematics teachers will have had personal conferences at home or a place selected by the parent of at least 80 percent of the total number of students grades 1-6 enrolled in the program for a minimum of 20 days.

   DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation, Research and Testing with the January accountability data.

3. By the end of the first semester, project teachers will have personal contact with parents at home or a place selected by the parent(s) of at least 65 percent of the total number of students (grades 7-8) enrolled in the program for a minimum of 20 days.

   DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation, Research and Testing the January accountability data.

4. By the end of the second semester each project teacher will have had a personal conference (at home, school, or by telephone) with the parent(s) of at least 80 percent of the total number (grades 1-8) of students whom he/she has served a minimum of 20 days the second semester.

   DOCUMENTATION: Chapter I Attendance and Parent Contact Form submitted to the appropriate project coordinator, the building principal, and the Department of Evaluation, Research and Testing with the May accountability data.

Instructional Staff Process Objectives 2, 3 and 4 all concern parent contacts made by Chapter I teachers. Table 7 and 8 and the narrative following provide the evaluation for all three objectives. Only students enrolled for 20 days or more are included in the data.

TABLE 7

Mathematics Parent Contacts - First Semester

Grade	Number of Students	Number Contacted Personally	Percent Contacted Personally
1-5	695	624	89.8
6-8	348	256	73.6

TABLE 8

Mathematics Parent Contacts - Second Semester

Grade	Number of Students	Number Contacted Personally	Percent Contacted Personally
1-8	1035	841	81.3

Objective 2

This objective states that Chapter I teachers were expected to make a personal contact with the parents of 80 percent of the students in grades 1-5 served for 20 days or more during the first semester. Personal contacts during the first semester included those accomplished by visits to homes by teachers, conferences at school with the parents and visits by parents to the Chapter I class. Telephone calls made by the teacher to the home did not count as personal contacts during the first semester.

Personal contacts occurred with parents of 89.8 percent of students in grades 1-5 during the first semester, exceeding the criterion of 80 percent. This objective was achieved.

Objective #3

This objective states that Chapter I teachers were expected to personally contact parents of 65% of the students in grades 6-8 during the first semester. Table 7 indicates that this criterion was exceeded as parents of 73.5 percent of the students were contacted. This objective was achieved.

Objective #4

During the second semester, program teachers were to contact parents of 80 percent of students in grades 1-8. During the spring semester, teachers are allowed to count telephone calls as personal contacts. Again, the criterion was exceeded as parents of 81.3 percent of the students were contacted. This objective was achieved.

From the data presented in Table 7 and 8, it is evident that Chapter I teachers did an outstanding job of establishing contact with parents of students, an area that has always received high priority in the program.

5. By October 14, 1983, Chapter I teachers will conduct a needs assessment at each building to determine the parent interests at individual buildings.

   DOCUMENTATION: Completed needs assessments submitted to the program coordinators with the October accountability data.

During previous years, parent involvement activities have been coordinated by staff persons assigned to Chapter I administration. During the 1981-82 school year, the parent involvement component included a coordinator (half time position), 2 school-community liaison persons (1 full time, 1 half time), a stenographer (half time) and a parent

resource aide (half time). For the 1982-83 school year, the staff was reduced to include the half time coordinator, half time stenographer and 1 school-community liaison. A report of evaluation entitled Chapter I Parent Involvement Component was prepared for both years in order to document a series of process and performance objectives related to parent involvement.

In 1983-84, budgetary reductions made it impossible to continue the staff positions associated with parent involvement. Chapter I teachers now became the primary force for planning and implementing parent activities at the buildings. Objectives specifying parent activities were included as a part of the proposals for the reading and mathematics programs. Instructional process objectives 5, 6, and 7 in this report document parent activities in lieu of a separate report. At many buildings, the parent activities conducted were not specific to only the reading or only the math program. Reading and math teachers jointly presented a program or provided activities that would be of interest to parents of students in both programs.

Appendix D contains a copy of the Chapter I Parent Activities Needs Assessment. Needs assessments were submitted from all buildings except St. Anthony. The teacher at St. Anthony indicated in a memo that she had already planned activities for the year and felt for this reason that the needs assessment would not serve a useful purpose.

The purpose of the needs assessment was twofold. If not only encouraged participation of parents in advisory council activities but also asked for suggestions for program activities that parents felt to be worthwhile.

On the form, parents were asked to select from a list of ten activities, two that were of most interest to them. They were also given the option of writing in their own suggestions. The most popular choice among parents was the desire to know what could be done at home to help the child learn. Other popular suggestions included "make and take activities," "assertive discipline," information on child development stages and "how to cope with children." This objective was achieved.

6. During the project year Chapter I teachers will implement a minimum of 2 parent involvement activities at each Chapter I building.

   DOCUMENTATION: An attendance sheet and process objective activity report submitted to program coordinators

Chapter I teachers submitted reports indicating the nature of each parent activity, the date and the number of attendance, Table 9 summarizes this information.

TABLE 9
Parent Involvement Activities
at Chapter I Mathematics Buildings
1983-84

Building	Number of Activities Required	Total Number of Parents Attending
All Saints	2	11
Brooks	2	16
Cattell	5	14
Edmunds-Jefferson	2	41
Findley	2	36
Holy Family 1, 2 & 3	2	14
Howe	2	28
King	2	86
Longfellow	2	29
Lucas	2	55
Madison	3	18
McKinley	2	6
Monroe	2	17
Moulton	2	26
Oak Park	2	50
Perkins	2	24
Rice	2	75
St. Anthony	2	32
Stowe	3	52
Wallace	2	15
Willard	3	57
Callanan	2	42
Harding	4	87
Hiatt	4	8
Hoyt	2	27
Weeks	2	34
Total	62	900

Chapter I teachers at all buildings provided at least 2 activities for parents during the 1983-84 school year. At one building, Cattell teachers indicated the occurrence of 5 activities. As show in Table 9, a total of 62 activities occurred. These were attended by 900 parents, resulting in an average attendance for each activity of 15 parents. Many of the attendance sheets indicated attendance and participation of persons other than parents including friends, former students, guests, teachers

(other than Chapter I) and building principals. The attendance figures in Table 9 reflect only the number of parents atttending as they were to be the group for which the activities were primarily intended.

Documentation submitted revealed a wide variety of activities including coffees, potlucks, make and take workshops, displays of project activities, etc. It would seem that the activities presented were worthwhile in that they all provided parents with information on how the program operates. Several teachers indicated that they were able to visit with parents rather extensively in conjunction with the activities. Chapter I teachers are to be commended for their efforts in planning and implementing activities for parents. This objective was achieved.

7. By October 7, 1983, Chapter I teachers at each building will submit the name of a parent to be a representative on the District Advisory Council.

   DOCUMENTATION: parent name submitted to the Chapter I Supervisor

Chapter I teachers submitted to the Chapter I Supervisor by the date indicated a list of names of parents who would serve on the Chapter I District Parent Advisory Council. The list included the name, address and phone number of the designated representative as well as the building being represented. All schools designated one individual as a representative except Tech with 4, Weeks with 3 and Hiatt with 2. The total number of representatives was 39. (This included the representatives from buildings that had a Chapter I reading program only.) The District Parent Advisory Council was the official representative body of Chapter I parents. By attending scheduled meetings, parents could receive information regarding the program proposals and ongoing activities in the program. This objective was achieved.

Family Performance Objective

1. Near the end of the project year a random sample of parents of identified Chapter I students will respond positively to the project activities.

   DOCUMENTATION: summary of responses obtained by the Department of Evaluation, Research and Testing on the parent questionnaire

Near the end of the year, a 10 percent random sample of all Chapter I parents was selected to receive a questionnaire asking them to provide their opinion on a variety of Chapter I program components. A copy of the questionnaire appears in Appendix E. These included home visits, conferences, general information about chapter I programs and the parent advisory council.

Parents responsded positively to all items and some took additional time to write comments expressing their feelings. The most positive responses were generated by the following items on the questionnaire:

"Scheduled school conferences with the Chapter I teacher are helpful to me,"

"Telephone calls and letters received from Chapter I teachers gave me information about my child's progress," (96.4 percent responded positively); and

"I received the Chapter I brochure and/or newsletters (85.7 percent responded positively).

This objective was achieved.

IV. COMMENTS

1. Chapter I mathematics students displayed gains in the mathematics composite score between pre and posttesing with the Iowa Tests of Basic Skills. Scores on these tests are reported using a metric known as the Normal Curve Equivalent (NCE). This is a scale similar to the percentile rank scale, but allowing for a more accurate measurement of gain between pre and posttesting. NCE is the unit of measurement used nationally to measure achievement gains of Chapter I students. The total population of Chapter I students (grades 2-8) who completed both a pre and posttest achieved a gain of 7.2 NCE units in the mathematics composite score. The amount of gain specified in the program objectives was 5.0 NCE units. The gain exhibited during the 1982-83 school year was 5.6 NCE units.
2. Chapter I mathematics students achieved mastery of over 82 percent of the objectives introduced to them in individual educational plans.
3. Chapter I mathematics teachers did an outstanding job of contacting with parents of students served. During the first semester, parents of 89.8 percent of the elementary students and 73.6 percent of the transitional students were contacted. This area has been assigned a high priority in the Chapter I programs of recent years.

V. RECOMMENDATIONS

1. The program objective which specifies reporting achievement gains by Chapter I students on the ITBS using the percentile rank scale should be deleted. The Normal Curve Equivalent Scale (NCE scale) which is used nationally and in Des Moines for Chapter I achievement reporting is a superior metric when reporting of achievement gains is desired. Chapter I administration may, however, wish to continue requesting that test results be reported in percentiles as well as NCEs as the percentile scale is useful as an indicator of where Des Moines Chapter I students score in comparison to the national norms.
2. Chapter I program administration should investigate expansion of the Chapter I computer data base to allow reporting of data for educational plan objectives introduced and achieved. Taking such action would allow reporting as well as processing of this information to be accomplished more efficiently.
3. Chapter I program administration should continue to stress the importance of maintaining and improving the rate of attendance displayed by students in the secondary mathematics program so that this rate equals or exceeds that of nonprogram students at the same building.

Appendix A

Budget and Expenditures

1983-84
General Administration Costs

Items		Budgeted	Expended
1 Supervisor .25 Program Assistant		42,908	42,908
Classified salaries		10,946	10,946
Fixed charges		12,386	12,386
Travel		2,000	1,339
Supervisor Program Assistant			
Supplies and Materials		6,350	5,583
Supplies 3,350 Dissemination 2,700 Graphic 300			
Graphic Service		2,100	2,016
Mileage		400	191
Data Processing		5,200	5,291
Computer Maintenance CPU Computer line rental Programming Costs	1,000 2,500 1,500 200		
Equipment		2,815	2,818
Computer and printer			
Printing		1,500	4,927*
Auditing		1,000	1,000
	Total	87,605	89,405

*Due to summer materials produced and cancellation of summer school program

1983-84
Evaluation

	Budgeted	Expended
Salary		
1.0 Evaluator	25,122	25,122
Fixed charges 23%	5,778	5,788
Travel and mileage	500	500
Materials and supplies	4,920	4,920
Data Processing	3,255	3,255
Data entry		
CPU		
Programming		
Maintenance and rental		
Tapes and test data		
Total	39,575	39,575

Data as of 7/17/84

1983-84
Elementary Math

Items	Budgeted	Expended
General Administration	21,902	22,351
DPAC	563	577
Evaluation	9,893	9,893
Indirect Charges	15,652	15,652
Professional Salaries	388,143	388,143
1 Coordinator 17.0 teachers		
Substitutes	4,000	1,416
Classified Salaries	6,478	6,478
.6 Secretary		
Fixed charges 23%	91,682	91,088
Materials and Supplies	4,380	3,756
Professional services	2,300	2,065
Inservice Travel		
Telephone	—	—
Mileage	1,425	956
Coordinator Teachers		
Total	546,418	542,375
Cost per student		797

1983-84
Secondary

Items		Budgeted	Expended
General Administration		25,405	25.928
DPAC		653	670
Evaluation		11,477	11,477
Indirect charges		18,156	18,156
Professional salaries		459,543	459,543
.75 Coordinator 19.5 teachers Juvenile Home	455,246 4,297		
Substitues		4,000	2,366
Classified salaries		6,874	6,874
.5 Secretary			
Fixed charges		108,196	107,820
Materials and supplies		2,800	2,559
Professional services		2,500	1,357
Inservice Travel			
Telephone		610	693
Mileage		1,425	587
Coordinator Teachers			
	Total	641,639	638,030
Cost per student			818

1983-84
Summary Sheet

#teacher

31.7 R	x 40 = 1268 =	46%
17.0 M	x 40 = 680 =	25%
19.5 S	x 40 = 780 =	29%

General Administration

		Reading (46%)	Math (25%)	Secondary (29%)
Budgeted	37,605	B 40,298	21,902	25,405
Expended	89,405	E 41,126	22,351	25,928

Evaluation

Budgeted	39,575	18,205	9,893	11,477
Expended	39,575	18,205	9,893	11,477

Indirect charges

Budgeted	62,608	28,800	15,652	18,156
Expended	62,608	28,800	15,652	18,156

DPAC

Budgeted	2,250	1,035	562	653
Expended	2,309	1,062	577	670

Appendix 6

Principal's Report of Chapter I Instruction

PRINCIPAL'S REPORT OF CHAPTER I INSTRUCTION

On Coordination of Classroom Teachers' and Chapter I Teacher's Instruction

School _____

Date _____

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Classroom Teacher	Visitation		Direct Instruction to Chapter I Students		JOINT PLANNING		COMMENTS:
	Date	Time	Yes	No	Yes	No	

33

Copy to Principal's

Public Schools: 1 copy to Executive Director of Elementary Education, 1 copy file

Parochial Schools: 1 copy Sister Dolores McHugh, 1 copy Department of Evaluation, 1 copy file.

39

40

Principal's Signature

Appendix C

Self-Anchoring Attitude Scale

INSTRUCTIONS FOR THE ADMINISTRATION OF SAAS: SELF-ANCHORING ATTITUDE SCALE (TOWARD LEARNING)

INTRODUCTION

The Self-Anchoring Attitude Scale (Toward Learning) is an inventory designed to assess attitudes toward learning of individuals in Grade 5 through adult. SAAS is unique in that each individual is asked to describe the end-points of the dimension under examination -- in this case attitude toward learning. This self-defined continuum is then used as a measuring device with no further verbal cues.

DIRECTIONS

Check that all students have a pencil or a pen and one blank sheet of paper. To get off to a good start, it is suggested to say something like this.

> *"Today I am going to ask you about students who like to learn and students who dislike to learn. I am interested in your ideas. This is not a test. There are no right or wrong answers.*
>
> *Not all students are the same. You may feel that some enjoy learning more than others. You may know students who like to learn and students who do not like to learn. Without saying anything to each other, spend the next 3-5 minutes thinking of what you would say about students who like to learn. To help you remember your ideas, write them down on the sheet of paper in front of you."*

Allow 3-5 minutes for the students to complete this. When you are satisfied that they are finished, ask them to spend the next few minutes thinking of what they would say about students who dislike to learn. They can use the other side of the paper to jot down their ideas.

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When they are finished, distribute the SAAS form to each student with the "ladder" side showing. Ask them to write their ideas for "Students Who Like to Learn" at the top of the page in the space provided and their ideas for "Students Who Dislike to Learn" at the bottom of the page.

After all students have finished writing, say to the students:

"At the left side of your paper is a picture of a ladder. Your description of students who like to learn is located at the top of the ladder and your description of students who dislike to learn is at the bottom.

You may be at the top of the ladder -- that is, a student who likes to learn. Or you may be at the very bottom of the ladder -- a student who dislikes to learn. Quite possibly you are somewhere in between those who like to learn and those who dislike to learn.

Take your pencil and mark an "X" on the rung of the ladder where you think you are right now."

When you are satisfied that all students have finished, ask them to write in their name, school, grade, and the day's date in the space provided above the ladder. Also, have them write in their name in the top right hand corner of the form in the space provided.

Collect all the SAAS forms.

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INFORMATION ABOUT SAAS

The Self-Anchoring Attitude Scale (Toward Learning) is an inventory designed to assess attitudes toward learning of individuals in Grade 5 through adult. SAAS is unique in that each individual is asked to describe the end-points of the dimension under examination -- in this case attitude toward learning. This self-defined continuum is then used as a measuring device with no further verbal cues.

DIRECTIONS

Check that all students have a pencil. Return the green SAAS form to the student who is identified on the form. The student's "fall rating" (the ladder having the student's first rating) should not be returned.

After all students have their original copy of the green SAAS form, say to the students:

"Last fall you described students who liked to learn and wrote that at the top of the page. You, also, described students who disliked to learn and you wrote that at the bottom of the page.

Read these descriptions. You may be like the student at the top of the page -- you may be like the student at the bottom of the page -- or you may be somewhere in between those who like to learn and those who dislike to learn.

Take your pencil and mark a X on the rung of the ladder where you think you are right now.

If you would like to write more about students who like to learn or students who dislike to learn, please do so. Write those comments and today's date beside any comments you add.

When you are satisfied that all students have finished, ask them to write their name, school, grade and the day's date in the space provided above the ladder.

Collect all the SAAS forms.

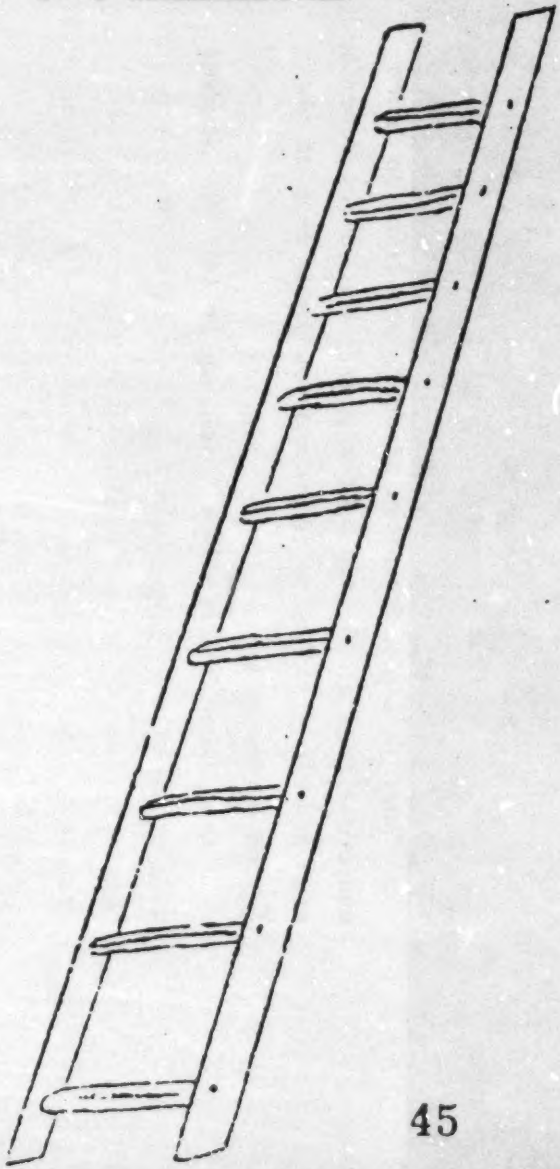
BEST COPY AVAILABLE

NAME _____

SCHOOL _____

GRADE _____

DATE _____



STUDENTS WHO DISLIKE TO LEARN

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Appendix D

Chapter I Parent Activities Needs Assessment

SCHOOL_____

CHAPTER I PARENT ACTIVITIES NEEDS ASSESSMENT

The purpose of Chapter I Parent Activities is to involve parents in the education of their children. We believe that the more parents are involved, the more students will learn. There are a number of ways parents can become active participants in the education of their children. Two primary ways of becoming involved are to participate as members in the District Advisory Council and to participate in planned activities. Some of the topics that will be covered during council meetings are the purposes of the advisory council, and information on Chapter I, how the program is planned, and what effect it has on students. In addition to these, there are many activities that can be conducted according to the interests of parents. We would like to learn what interests you.

Please mark the two program ideas that interest you most, or write in your own ideas.

__1. What parents can do at home to help the child learn.

__2. Chapter I breakfast, luncheon, potluck, tea

__3. Parents volunteering

__4. Do-it-yourself educational games (Parent/Child)

__5. Assertive Discipline

__6. Make and Take activities

__7. The child development stages children go through, such as, "Coping with Teenagers"

__8. Speaker on drugs/alcohol

__9. How to communicate with children

__10. Parent/Child educational field trips

__ _____

__ _____

__ _____

Appendix E

Chapter I Parent Questionnaire

Chapter 1 Parent Survey

Please help us to improve the Chapter 1 program by circling the number that best describes how you feel about each of the following statements:

	Yes	No	No Opinion
I. Parent/Teacher personal contact			
A. Home visits			
1. Home visits made by the Chapter 1 teacher gave me useful information about the Chapter 1 program.	1	2	3
2. Home visits made by the Chapter 1 teacher gave me useful information about my child.	1	2	3
3. Home visits provide an opportunity for my child's teacher and me to openly discuss the Chapter 1 program.	1	2	3
B. Conferences			
1. Scheduled school conferences with the Chapter 1 teacher are helpful to me.	1	2	3
2. Chapter 1 sponsored activities at the school have improved communication between home and school.	1	2	3
3. Telephone calls and letters received from Chapter 1 teachers gave me information about my child's progress.	1	2	3
II. Information			
A. Chapter 1 was explained to my satisfaction when my child was selected to be in the program.	1	2	3
B. I received the Chapter 1 brochure and/or newsletters.	1	2	3
C. The Chapter 1 brochure provides information about how the Chapter 1 program operates.	1	2	3
D. The newsletter Close Up on Learning provides information about Chapter 1 activities at different schools.	1	2	3
III. Parent Council			
A. The school advisory council(s) provide an opportunity for members and community persons to receive important information about the rules and regulations concerning Chapter 1.	1	2	3
B. The school advisory council(s) organizations provide the opportunity for members to express their concerns about the Chapter 1 program(s).	1	2	3

Please make any comments on the back of this sheet regarding suggestions, ideas or opinions you may have about Chapter 1 proposals, advisory meetings, newsletters, brochures or any other subject relating to Chapter 1

THANKS!!